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EXAMINER	
YOUNG, JANELLE N	

ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/529,399	BAN ET AL.	
	Examiner	Art Unit	
	Janelle N. Young	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-9, 12-13, 16-17, 19-21, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Choi et al. (US Patent 2004/0077373).

As for claim 1, Choi et al. teaches a mobile digital device having an operating input unit, the input unit comprising:

a ten-key pad being comprised of a key mat on which ten-key buttons with respective projections on the under surfaces thereof are laid out and a board on which respective contacts corresponding to the projections are laid out (Fig. 1:**150** & Fig. 2; Abstract; and Page 1, Para 0003 & 0009 of Choi et al.); and

an electrostatic capacity sensing pad (Fig 2:**153** of Choi et al.) having through holes to be inserted the projections corresponding thereto and being provided with between the key mat and the board (Page 2, Para 0035 and Page 3-4, Para 0048 of Choi et al.).

As for claim 2, Choi et al. teaches a mobile digital device having an operating input unit (Fig. 4:**60** of Choi et al.), wherein the ten-key buttons are printed on the key mat (Page 1, Para 0014 & 0017-0018; Page 2, Para 0019-0020; Page 2, Para 0032; and Page 3, Para 0038, 0041, 0043, & 0045 of Choi et al.).

As for claim 3, Choi et al. teaches a mobile digital device comprising:

a ten-key pad being comprised of a key mat on which bosses (Fig. 2:**55** of Choi et al.); which reads on claimed ten-key buttons with respective projections on the under surfaces thereof are laid out and a key circuit board (Fig. 2:**151** of Choi et al.) on which respective contacts corresponding to the projections are laid out (Page 2, Para 0034 of Choi et al.);

an electrostatic capacity sensing pad for sensing an electrostatic capacity change to detect a touched region and having through holes to be inserted the projections corresponding thereto and being provided with between the key mat and the key circuit board (Fig. 2:**151** of Choi et al.) (Page 2, Para 0035 and Page 3-4, Para 0048 of Choi et al.);

a memory (Fig. 4:**20** of Choi et al.) for keeping predetermined item names as table elements corresponded to respective small regions provided within a pad region of the electrostatic capacity sensing pad (Page 3, Para 0039 of Choi et al.);

an item name selector (mode shift button - Fig. 1:**170** of Choi et al.) for selecting an item name corresponded to a small region in which a representative point of the touched region is situated (Page 2, Para 0032); and

a data value determiner for determining a data value of the selected item name according to the size of the touched region (Page 2, Para 0020 and Page 3, Para 0046 of Choi et al.).

As for claim 4, Choi et al. teaches a mobile digital device, further comprising:

a memory controller for storing the touched region detected by the electrostatic capacity sensing pad in a memory (Page 3, Para 0039 of Choi et al.);

a locus generator for generating a locus from a set of representative points of the touched region (Page 1, Para 0018 of Choi et al.); and

wherein the item names kept in the memory are background, line thickness, and line color (Page 3, Para 0038-0041 of Choi et al.).

As for claim 5, Choi et al. teaches a mobile digital device, further comprising:

a display panel (Fig 1:**140** and Page 2, Para 0019 & 0030 of Choi et al.); and

a display controller for generating displaying data from the selected item name and the determined data value to display a concrete symbol corresponded to the determined value in an area within the display panel assigned according to the selected item name Page 3, Para 0041, 0043-0044, & 0046-0047 of Choi et al.).

As for claim 6, Choi et al. teaches a mobile digital device, wherein each of the item names kept in the memory has subdivision item names thereof and the data value

determiner determines a data value by tracking the subdivision item names (Page 3, Para 0039 of Choi et al.).

As for claim 7, Choi et al. teaches a mobile digital device comprising:

a ten-key pad being comprised of a key mat on which bosses (Fig. 2:**55** of Choi et al.); which reads on claimed ten-key buttons with respective projections on the under surfaces thereof are laid out and a key circuit board (Fig. 2:**151** of Choi et al.) on which respective contacts corresponding to the projections are laid out (Page 2, Para 0034 of Choi et al.);

an electrostatic capacity sensing pad for sensing an electrostatic capacity change to detect a touched region and having through holes to be inserted the projections corresponding thereto and being provided with between the key mat and the key circuit board (Fig. 2:**151** of Choi et al.) (Page 2, Para 0035 and Page 3-4, Para 0048 of Choi et al.);

a memory controller for storing the touched region detected by the electrostatic capacity sensing pad in a memory (Page 3, Para 0039 of Choi et al.);

a locus generator for generating a locus from a set of representative points of the touched region (Page 1, Para 0018 of Choi et al.); and

a breakpoint detector for detecting a breakpoint of the locus according to a feature of the touched region (Page 2, Para 0035 and Page 3, Para 0046 of Choi et al.).

As for claim 8, Choi et al. teaches a mobile digital device, wherein the breakpoint detector detects the breakpoint according to a size of the touched region (Page 2, Para 0032-0035 of Choi et al.).

As for claim 9, Choi et al. teaches a mobile digital device, further comprising: a character recognizer (Fig. 4:**50** of Choi et al.) for recognizing a character from the locus generated by the locus generator and the breakpoint detected by the breakpoint detector (Page 2, Para 0032-0033 and Page 3, Para 0044 of Choi et al.).

As for claim 12, Choi et al. teaches a mobile digital device, wherein the breakpoint detector detects the breakpoint according to a number of the touched regions detected by the electrostatic capacity sensing pad simultaneously (Page 1, Para 0008; Page 2, Para 0032-0035; and Pages 3-4, Para 0048 of Choi et al.).

As for claim 13, Choi et al. teaches a mobile digital device, further comprising: a character recognizer for recognizing a character from the locus generated by the locus generator and the breakpoint detected by the breakpoint detector (Page 2, Para 0032-0033 and Page 3, Para 0043-0046 of Choi et al.).

As for claim 16, Choi et al. teaches a mobile digital device comprising:

a ten-key pad being comprised of a key mat on which bosses (Fig. 2:**55** of Choi et al.); which reads on claimed ten-key buttons with respective projections on the under surfaces thereof are laid out and a key circuit board (Fig. 2:**151** of Choi et al.) on which respective contacts corresponding to the projections are laid out (Page 2, Para 0034 of Choi et al.);

an electrostatic capacity sensing pad for sensing an electrostatic capacity change to detect a touched region and having through holes to be inserted the projections corresponding thereto and being provided with between the key mat and the key circuit board (Page 2, Para 0035 and Page 3-4, Para 0048 of Choi et al.); and

a controller (Fig. 4:**10** of Choi et al.) for selecting a function corresponded to a feature of the touched region detected by the electrostatic capacity sensing pad and executing the selected function (Page 3, Para 0038-0047 of Choi et al.).

As for claim 17, Choi et al. teaches a mobile digital device, wherein the controller selects a function corresponded to a size of the touched region detected by the electrostatic capacity sensing pad and executing the selected function (Page 3, Para 0038-0047 of Choi et al.).

As for claim 19, Choi et al. teaches a mobile digital device, wherein the controller selects a function according to a number of the touched regions detected by the electrostatic capacity sensing pad simultaneously and executing the selected function (Page 1, Para 0008 and Page 3, Para 0038-0047 of Choi et al.).

As for claim 20, Choi et al. teaches a mobile digital device comprising:

a ten-key pad being comprised of a key mat on which bosses (Fig. 2:**55** of Choi et al.); which reads on claimed ten-key buttons with respective projections on the under surfaces thereof are laid out and a key circuit board on which respective contacts corresponding to the projections are laid out (Page 2, Para 0034 of Choi et al.);

an electrostatic capacity sensing pad for sensing an electrostatic capacity change to detect a touched region and having through holes to be inserted the projections corresponding thereto and being provided with between the key mat and the key circuit board (Page 2, Para 0035 and Page 3-4, Para 0048 of Choi et al.);

a memory for keeping predetermined functions corresponded to respective small regions provided within a pad region of the electrostatic capacity sensing pad (Page 3, Para 0039 of Choi et al.);

a metal dome (Fig. 2:**152** of Choi et al.) function selector for selecting a function corresponded to a small region in which a representative point of the touched region is situated; and a function controller for controlling the selected function according to a feature of the touched region detected by the electrostatic capacity sensing pad (Page 1, Para 0016; Page 2, Para 0033-0034; and Page 3, Para 0038-0047 of Choi et al.).

As for claim 21, Choi et al. teaches a mobile digital device, wherein the function controller controls the selected function according to a size of the touched region detected by the electrostatic capacity sensing pad (Page 3, Para 0038-0047 of Choi et al.).

As for claim 23, Choi et al. teaches a mobile digital device, wherein the function controller controls the selected function according to a number of the touched regions detected by the electrostatic capacity sensing pad simultaneously (Page 1, Para 0008 and Page 3, Para 0038-0047 of Choi et al.).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (US Patent 2004/0077373) as applied to claim 7 above, and further in view of Bick (US Patent 2002/0049070).

As for claim 10, Choi et al. teaches a mobile digital device comprising: a ten-key pad being comprised of a key mat on which bosses (Fig. 2:**55** of Choi et al.); which reads on claimed ten-key buttons with respective projections on the under surfaces thereof are laid out and a key circuit board (Fig. 2:**151** of Choi et al.) on which respective contacts corresponding to the projections are laid out (Page 2, Para 0034 of Choi et al.); an electrostatic capacity sensing pad for sensing an electrostatic capacity change to detect a touched region and having through holes to be inserted the projections corresponding thereto and being provided with between the key mat and the key circuit board (Fig. 2:**151** of Choi et al.) (Page 2, Para 0035 and Page 3-4, Para 0048 of Choi et al.); a memory controller for storing the touched region detected by the electrostatic capacity sensing pad in a memory (Page 3, Para 0039 of Choi et al.); a locus generator for generating a locus from a set of representative points of the touched region (Page 1, Para 0018 of Choi et al.); and a breakpoint detector for detecting a

breakpoint of the locus according to a feature of the touched region (Page 2, Para 0035 and Page 3, Para 0046 of Choi et al.).

What Choi et al. does not explicitly teach is a touch-sensitive pointing device, a user lightly touches the keymat without exerting enough force to depress any of the keys.

However, Bick teaches a mobile digital device, further comprising: a direction determiner for determining a touch direction according to a figure of the touched region detected by the electrostatic capacity sensing pad; and wherein the breakpoint detector detects the breakpoint according to the touch direction (Fig. 5; Abstract; Page 1, Para 006; Page 1-2, Para 0024; and Page 2, Para 0027 of Bick).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a touch-sensitive pointing device, a user lightly touches the keymat without exerting enough force to depress any of the keys, as taught by Bick, in keypad assembly for a portable radiotelephone wherein a keypad can also be used as a touch screen panel of Choi et al., because Choi et al. already teaches a portable radiotelephone including a keypad assembly that can be used as a touch screen (Page 2, Para 0020 of Choi et al.).

The motivation of this combination would be is to provide a keypad assembly for a portable radiotelephone wherein a keypad can also be used as a touch screen panel without increasing the volume of the radiotelephone, and a method of controlling the same. Further, another object of the present invention is to provide a keypad assembly for a portable radiotelephone and a method of controlling the same, in which when the

keypad assembly is used for a touch screen function, it is unnecessary to employ an input means such as a stylus pen. Still another object of the present invention is to provide a keypad assembly for a portable radiotelephone and a method of controlling the same, in which a keypad is provided with a sensor so that it can be used as a touch screen panel when shifting a mode, as taught by Choi et al. in Page 1, Para 0012-0015. Bick seeks to provide an improved user interface, by providing a user interface device for electronic apparatus. The keypad may include a region provided with said impedance sensor but without a key. The keys may be comprised in a keymat and the impedance sensor may be disposed beneath the keymat. This keypad of a mobile telephone handset comprises a keymat beneath which are disposed capacitive sensing plates. The keypad may be used in a touch pad by sliding a finger over the surface of the keymat (Abstract and Page 1, Para 0004-0006 of Bick).

As for claim 11, Choi et al. teaches a mobile digital device, further comprising: a character recognizer (Fig. 4:**50** of Choi et al.) for recognizing a character from the locus generated by the locus generator and the breakpoint detected by the breakpoint detector (Page 2, Para 0032-0033 and Page 3, Para 0043-0046 of Choi et al.).

3. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (US Patent 2004/0077373) and further in view of Bick (US Patent 2002/0049070).

As for claim 14, Choi et al. teaches a mobile digital device comprising:

a ten-key pad being comprised of a key mat on which bosses (Fig. 2:**55** of Choi et al.); which reads on claimed ten-key buttons with respective projections on the under surfaces thereof are laid out and a key circuit board (Fig. 2:**151** of Choi et al.) on which respective contacts corresponding to the projections are laid out (Page 2, Para 0034 of Choi et al.);

an electrostatic capacity sensing pad for sensing an electrostatic capacity change to detect a touched region and having through holes to be inserted the projections corresponding thereto and being provided with a portion having the through holes between the key mat and the key circuit board (Fig. 2:**151** of Choi et al.) and with the other portion on a part of a chassis of the mobile digital device (Page 2, Para 0035 and Page 3-4, Para 0048 of Choi et al.);

a memory controller for storing the touched region detected by the electrostatic capacity sensing pad in a memory (Page 3, Para 0039 of Choi et al.);

a locus generator for generating a locus from a set of representative points of the touched regions stored in the memory (Page 1, Para 0018 of Choi et al.) ; and

a breakpoint detector for detecting a breakpoint of the locus according to the touch direction determined by the direction determiner (Page 2, Para 0035 and Page 3, Para 0046 of Choi et al.).

What Choi et al. does not explicitly teach is a touch-sensitive pointing device, a user lightly touches the keymat without exerting enough force to depress any of the keys.

However, Bick teaches a mobile digital device, further comprising: a direction determiner for determining a touch direction according to a figure of the touched region detected by the electrostatic capacity sensing pad direction (Fig. 5; Abstract; and Page 2, Para 0027 of Bick).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a touch-sensitive pointing device, a user lightly touches the keymat without exerting enough force to depress any of the keys, as taught by Bick, in keypad assembly for a portable radiotelephone wherein a keypad can also be used as a touch screen panel of Choi et al., because Choi et al. already teaches a portable radiotelephone including a keypad assembly that can be used as a touch screen (Page 2, Para 0020 of Choi et al.).

The motivation of this combination would be is to provide a keypad assembly for a portable radiotelephone wherein a keypad can also be used as a touch screen panel without increasing the volume of the radiotelephone, and a method of controlling the same. Further, another object of the present invention is to provide a keypad assembly for a portable radiotelephone and a method of controlling the same, in which when the keypad assembly is used for a touch screen function, it is unnecessary to employ an input means such as a stylus pen. Still another object of the present invention is to provide a keypad assembly for a portable radiotelephone and a method of controlling

the same, in which a keypad is provided with a sensor so that it can be used as a touch screen panel when shifting a mode, as taught by Choi et al. in Page 1, Para 0012-0015. Bick seeks to provide an improved user interface, by providing a user interface device for electronic apparatus. The keypad may include a region provided with said impedance sensor but without a key. The keys may be comprised in a keymat and the impedance sensor may be disposed beneath the keymat. This keypad of a mobile telephone handset comprises a keymat (17) beneath which are disposed capacitive sensing plates. The keypad may be used in a touch pad by sliding a finger over the surface of the keymat (Abstract and Page 1, Para 0004-0006 of Bick).

As for claim 15, Bick teaches a mobile digital device, wherein the touch direction determined by the direction determiner is a direction held by the user (Fig. 5; Abstract; and Page 2, Para 0027 of Bick).

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (US Patent 2004/0077373) as applied to claim 16 above, and further in view of Bick (US Patent 2002/0049070).

As for claim 18, Choi et al. teaches a mobile digital device comprising: a ten-key pad being comprised of a key mat on which bosses (Fig. 2:**55** of Choi et al.); which reads on claimed ten-key buttons with respective projections on the under surfaces thereof are laid out and a key circuit board (Fig. 2:**151** of Choi et al.) on which respective contacts corresponding to the projections are laid out (Page 2, Para 0034 of Choi et al.); an electrostatic capacity sensing pad for sensing an electrostatic capacity

change to detect a touched region and having through holes to be inserted the projections corresponding thereto and being provided with between the key mat and the key circuit board (Page 2, Para 0035 and Page 3-4, Para 0048 of Choi et al.); and a controller (Fig. 4:**10** of Choi et al.) for selecting a function corresponded to a feature of the touched region detected by the electrostatic capacity sensing pad and executing the selected function (Page 3, Para 0038-0047 of Choi et al.).

What Choi et al. does not explicitly teach is a touch-sensitive pointing device, a user lightly touches the keymat without exerting enough force to depress any of the keys.

However, Bick teaches a mobile digital device, further comprising: a direction determiner for determining a touch direction according to a figure of the touched region detected by the electrostatic capacity sensing pad; and wherein the controller (Fig. 1:**15** of Bick) selects a function corresponded to the touch direction determined by the direction determiner and executing the selected function (Fig. 5; Abstract; and Page 2, Para 0027 of Bick).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a touch-sensitive pointing device, a user lightly touches the keymat without exerting enough force to depress any of the keys, as taught by Bick, in keypad assembly for a portable radiotelephone wherein a keypad can also be used as a touch screen panel of Choi et al., because Choi et al. already teaches a portable radiotelephone including a keypad assembly that can be used as a touch screen (Page 2, Para 0020 of Choi et al.).

The motivation of this combination would be is to provide a keypad assembly for a portable radiotelephone wherein a keypad can also be used as a touch screen panel without increasing the volume of the radiotelephone, and a method of controlling the same. Further, another object of the present invention is to provide a keypad assembly for a portable radiotelephone and a method of controlling the same, in which when the keypad assembly is used for a touch screen function, it is unnecessary to employ an input means such as a stylus pen. Still another object of the present invention is to provide a keypad assembly for a portable radiotelephone and a method of controlling the same, in which a keypad is provided with a sensor so that it can be used as a touch screen panel when shifting a mode, as taught by Choi et al. in Page 1, Para 0012-0015. Bick seeks to provide an improved user interface, by providing a user interface device for electronic apparatus. The keypad may include a region provided with said impedance sensor but without a key. The keys may be comprised in a keymat and the impedance sensor may be disposed beneath the keymat. This keypad of a mobile telephone handset comprises a keymat (17) beneath which are disposed capacitive sensing plates. The keypad may be used in a touch pad by sliding a finger over the surface of the keymat (Abstract and Page 1, Para 0004-0006 of Bick).

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (US Patent 2004/0077373) as applied to claim 20 above, and further in view of Bick (US Patent 2002/0049070).

As for claim 22, Choi et al. teaches a mobile digital device comprising: a ten-key pad being comprised of a key mat on which bosses (Fig. 2:**55** of Choi et al.); which reads on claimed ten-key buttons with respective projections on the under surfaces thereof are laid out and a key circuit board on which respective contacts corresponding to the projections are laid out (Page 2, Para 0034 of Choi et al.);an electrostatic capacity sensing pad for sensing an electrostatic capacity change to detect a touched region and having through holes to be inserted the projections corresponding thereto and being provided with between the key mat and the key circuit board (Page 2, Para 0035 and Page 3-4, Para 0048 of Choi et al.);a memory for keeping predetermined functions corresponded to respective small regions provided within a pad region of the electrostatic capacity sensing pad (Page 3, Para 0039 of Choi et al.); a metal dome (Fig. 2:**152** of Choi et al.) function selector for selecting a function corresponded to a small region in which a representative point of the touched region is situated; and a function controller for controlling the selected function according to a feature of the touched region detected by the electrostatic capacity sensing pad (Page 1, Para 0016; Page 2, Para 0033-0034; and Page 3, Para 0038-0047 of Choi et al.).

What Choi et al. does not explicitly teach is a touch-sensitive pointing device, a user lightly touches the keymat without exerting enough force to depress any of the keys.

However, Bick teaches a mobile digital device, further comprising: a direction determiner for determining a touch direction according to a figure of the touched region detected by the electrostatic capacity sensing pad; and wherein the function controller

(Fig. 1:**15** of Bick) controls the selected function according to a touch direction determined by the direction determiner (Fig. 5; Abstract; and Page 2, Para 0027 of Bick).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a touch-sensitive pointing device, a user lightly touches the keymat without exerting enough force to depress any of the keys, as taught by Bick, in keypad assembly for a portable radiotelephone wherein a keypad can also be used as a touch screen panel of Choi et al., because Choi et al. already teaches a portable radiotelephone including a keypad assembly that can be used as a touch screen (Page 2, Para 0020 of Choi et al.).

The motivation of this combination would be is to provide a keypad assembly for a portable radiotelephone wherein a keypad can also be used as a touch screen panel without increasing the volume of the radiotelephone, and a method of controlling the same. Further, another object of the present invention is to provide a keypad assembly for a portable radiotelephone and a method of controlling the same, in which when the keypad assembly is used for a touch screen function, it is unnecessary to employ an input means such as a stylus pen. Still another object of the present invention is to provide a keypad assembly for a portable radiotelephone and a method of controlling the same, in which a keypad is provided with a sensor so that it can be used as a touch screen panel when shifting a mode, as taught by Choi et al. in Page 1, Para 0012-0015. Bick seeks to provide an improved user interface, by providing a user interface device for electronic apparatus. The keypad may include a region provided with said

impedance sensor but without a key. The keys may be comprised in a keymat and the impedance sensor may be disposed beneath the keymat. This keypad of a mobile telephone handset comprises a keymat (17) beneath which are disposed capacitive sensing plates. The keypad may be used in a touch pad by sliding a finger over the surface of the keymat (Abstract and Page 1, Para 0004-0006 of Bick).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle N. Young whose telephone number is (571) 272-2836. The examiner can normally be reached on Monday through Friday: 8:30 am through 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JNY
July 6, 2006

NAY MAUNG
SUPERVISORY PATENT EXAMINER